

**SEQUENCE LISTINGS**

## SEQUENCE ID NO 1

CGCGGCCGCGCTGCCCCCTGGCTTCGCGGAAGCCCTGAGTAGCGCAGCGCCCTCGCCGCACGCAAGGCT  
GCAGTCCCGCTCCAGGCCAGAGTCCCAGGAGAGCGTCCTCCGCGCTCACAGGCGCCTTTGTCTTCCCG  
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## SEQUENCE ID NO 2

MPRSFLVKKHFNASKKPNYSELDTHTVIISPYLESYSPVPIQPEILSSGAYSPITVWTTAAPFHAQ  
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YSTFSGLAKHKQLHCDAQSRKSFCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGH  
RTHTGKPFSCPHCNRAFAFRSNLRAHLQTHSDVKKYQCKNCSKTFSRMSLLHKHEESGCCVAH

## SEQUENCE ID NO 3

CATCCCCTTGACCCTCCAATCACCTCGGGCTCCCATTTGATTGGAAGGCGGCAAAGGCTTTAATCTCC  
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## SEQUENCE ID NO 4

MLLGVVVGRGEQSAAFPNGENVCEWVLKRGCRLELRGAGRI FVGCCGEAFEPQKPGFYKGFHFFLCV  
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GGPGGKALGSDCGSSSGSSSGGPSAPTSSSVLGSLVAPVSPYKPGQTVFPLPPAGMTYPGSLAGAY  
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## SEQUENCE ID NO 5

GAGAGCAGACCAGGCCCGGTGGAGAATTAGGTGCTGCTGGGAGCTCCTGCCTCCCACAGGATTCCAGC  
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## SEQUENCE ID NO 6

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VYYDIFEPLLSQFKQLALNATRKP MYYTGGSLIPLLQLPGDDGLNVEWLVPDVQGS GKTATMTLPDTE

GMILLNTGLEGTVAENPVPIVHTPSGNILTLESCLOQLATHPGHWGIHLQIVEPAALRPSLALLARLS  
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## SEQUENCE ID NO 7

CTGGGGCTGGATTGAGCTGACCACAGGCCACACCAGACTCCTCTCTGCTCCTGAGGAAGACAGGGCAG  
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## SEQUENCE ID NO 8

MLPGAWLLWTSLLLLARPAQPCPMGCD CFVQEVFCSDEELATVPLDIPPYTKNII FVETSFTTLETRA  
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QWNMLRVLPAGLFAHTPCLVGLSLTHNQLETV AEGTFAHLSNLRSLMLS YNAITHLPAGIFRDLEELV  
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WLQQYTDRLLNIQTYCAGPAYLKQVVPALNEKQLVCPVTRDHLGFQVTPDESKAGGSWDLAVQERA  
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P

## SEQUENCE ID NO 9

GCGGGCCGCGCGCATCCCCTGCGGCGGCGGCGGCGGCCTCGGGCGGGTGGGGGCAGCGCTCCCGCTCC  
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AGACCATCGTGGACAGAATAGTAAGAGCTGAGGTCCATCGGCTGGTGGTGGTAAATGAAGCAGATAGT  
ATTGTGGGTATTATTTCCCTGTCGGACATTCTGCAAGCCCTGATCCTCACACCAGCAGGTGCCAAACA  
AAAGGAGACAGAAACGGAGTGACCGCCGTGAATGTAGACGCCCTAGGAGGAGAACTTGAACAAAGTCT  
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AGGTATTTCTTCAGTGATGTTGAAATTAAGCTTAAAAAGAAAGATTTTATGTGCTTGAAGATTCAG  
GCTTGCATTAAAAGACTGTTTTTCAGACCTTTGTCTGAAGGATTTTAAATGCTGTATGTCATTAAAGTG  
CACTGTGTCCTGAAGTTTTTATTATTTTTTCAATTTCAAAGAATTCCTGGTATGGAACAGGTGATGTGG  
CATAAGGTGAGTGCACGGTATGTTTCAAGTGCCTTATGTCCGAATACAGCAATATGTCACCGC  
CGCAGCCGGGGCGCACGCGTGTGAAACAACACCGAGCTTGAATGTGGAAGTCTTTGAACCTTTTACCA  
AATCAGTTTGTCTTTCTTTAGATTTGTCAAAAAGTTGTAATTTGAATATAAATAATTACTTTAAAATTG  
TAATGACACTTTTACACGTAAGTGTTTTTGTCTGGGCTGCCTTGGGCGGCTGCCATTGGGCACGGCTG  
CCATTGGTGT

## SEQUENCE ID NO 10

RAARIPCGGGGGLGRVGAALPLRPRPPLPASPARPLLPAARQSQAPALGRPRARRPGTSVAAHADRCF  
PPPPQAALAAALGPAEAGMLEKLEFEDEAVEDSESGVYMRFMRSCHKCYDIVPTSSKLVVFDTTLQVKK  
AFFALVANGVRAAPLWESKKQS FVGMLTITDFINILHRYKSPMVQIYELEEHKIETWRELYLQETFK  
PLVNISPDA SLFDVYSLIKNKHRLPVIDPISGNALYILTHKRILKFLQLFMSDMPKPAFMKQNLDE  
LGIGTYHNIAFIHPDTPIIKALNIFVERRISALPVVDESGKVVDIYSKFDVINLAAEKTNNLDITVT  
QALQHR SQYFEGVVKCNKLEILETIVDRIVRAEVHRLVVVNEADSIVGIISLSDILQALILTPAGAKQ  
KETETE

## SEQUENCE ID NO 11

GAAGCCTTCAGGCAGCCTCAACTCAGCCCCAAGCCACTGCTCTCCCATCCCAGTCCCTGGAAATCCAC  
CCACTTGGCCCAGCTCACCCCAACTCCAACCCACTGGGACCCAGTCTCCAGGGGCCTGACTGTGGGCG



GCAGCCACTCCTGAGTGAGCAAAGGTTCTCCGCGGTGCTCTCCCGTCCAGAGCCCTGCTGATGGGGA  
AGTCCGAAGGCCAGTGGGGATGGTGGAGAGCGCCGGCCGTGCAGGGCAGAAGCGCCCGGGGTTCCTG  
GAGGGGGGGCTGCTGCTGCTGCTGCTGCTGGTGACCGCTGCCCTGGTGGCCTTGGGTGTCTCTACGC  
CGACCGCAGAGGGATCCCAGAGGCCCAAGAGGTGAGCGAGGTCTGCACCACCCCTGGCTGCGTGATAG  
CAGCTGCCAGGATCCTCCAGAACATGGACCCGACCACGGAACCGTGTGACGACTTCTACCAGTTTGCA  
TGCGGAGGCTGGCTGCGGCGCCACGTGATCCCTGAGACCAACTCAAGATACAGCATCTTTGACGTCCT  
CCGCGACGAGCTGGAGGTCATCCTCAAAGCGGTGCTGGAGAATTGACTGCCAAGGACCGGCCGGCTG  
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CCCCTGCTGGACATCTTGGAGGTGGTGGGAGGCTGGCCGGTGGCGATGGACAGGTGGAACGAGACCGT  
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GAGAGACACGACGTCATCGCCTTGTAACCGGATGGGACTGGAGGAGCTGCAAAGCCARTTTGGCCT  
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ATGAGGAAGTGGTGGTCTATGGCATCCCCTACCTGCAGAACCTTGAAAACATCATCGACACCTACTCA  
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GCTGGACGAGCTGGGCTGGATGGACGAGGAGTCCAAGAAGAAGGCGCAGGAGAAGGCCATGAGCATCC  
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CGAAGGTGCAGCTAGCGGCGACCCAGTGTACGTCCCGCCCCGGCCAACCATGCCAAGCCTGCCTGCCA  
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TACCTGGACCGGAGCCCCCTCCACAGACACCCGCGGGGCTCAGTGCCCCCGTCACAGCTCTGTAGAGA  
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CTAAGTAAATGCTTCAAAGAAATCA

## SEQUENCE ID NO 12

SLQAASTQPQATALPSQSLEIHPLGPAHPNSNPLGPSLQGPDCGRQPLLSEQRFLRGALPSRALLMGK  
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AARILQNMDPTTEPCDDFYQFACGGWLRRHVI PETNSRYSIFDVL RDELEVILKAVLENSTAKDRPAV  
EKARTLYRSCMNQSVIEKRG SQPLLDILEVVGWPVAMDRWNETVGLEWELERQLALMNSQFNRRVLI  
DLFIWNDDQNSSRHI IYIDQPTLGMP SREYYFN GGSNRK VREAYLQFMVSVATLLREDANLPRD SCLV  
QEDMVQVLELETQLAKATVPQEERHDVIALYHRMGLEELQSQFGLKGFNWTLFIQTVLSSVKIKLLPD  
EEVVYGI PYLQNL ENI IDTYSARTIQNYLVWRLVLD RIGSLSQRFKDTRVNYRKALFGTMVEEVRWR  
ECVGYVNSNMENAVGSLYVREAFPGDSKSMVRELIDKVRTVFVETLDELGWMDEESKKKAQEKAMSIR  
EQIGHPDYILEEMNRRLDEEYSNLNFSEDLYFENSLQNLKVGAQ RSLRKLREKVDPNLWIIGA AVVNA  
FYSPNRNQIVFPAGILQPPFFSKEQPQALNFGGIGMVIGHEITHGFDDNGRNFDKNGNMMDWWSNFST  
QHFREQSECMIIYQYGNYSWDLADEQN VNGFNTLGENIADNGGVRQAYKAYLKWMAEGGKDQQLPGLDL  
THEQLFFINYAQVWCGSYRPEFAIQSIKTDVHSPLKYRVLGSLQNLAAFADTFHCARGTPMHPKERCR  
VW

## SEQUENCE ID NO 13

CGGCGCGTCGCTGCGCCGCACGTGTGCGAGCCCGGCCCGCGGTGAGTCGGCTGGAGCGCATCTGGTCC  
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TCTCTTGCGTCCCAACCAGAGCGCTGGCCACCTCGCCGCCAGCTCACGCCGCGCCCGCGCTCCCAGG  
CTCCGGGTTTTCTTAAATGTTTTCTTGGAGCCTTAAAGATGGAGATGACAGAAATGACTGGTGTGTGCG  
CTGAAACGTGGGGCACTGGTTGTGGAAGATAATGACAGTGGAGTCCCAGTTGAAGAGACAAAAAACA  
GAAGCTGTCGGAATGCAGTCTAACCAAAGGTCAAGATGGGCTACAGAATGACTTTCTGTCCATCAGTG  
AAGACGTGCCTCGGCCTCCTGACACTGTCAGTACTGGGAAAGGTGGAAAGAATTCTGAGGCTCAGTTG  
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TGCAGACATGATGAAGCATGGACTCACTGAGGCTGACGTAGGCATCACCAAGTTTGTGAGTTCTCATC  
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CGGATCAGCCATTTGAATGACTTGTCCATTCCAGTGGATGAGGAGGACCCTTCAGAAGACATATTTAC  
AGTTTTGACAGCTGAAGAAAAGCAGCGATTGGAAGAGCTCCAGCTGTTCAAAAATAAGGAAACCAGTG  
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TTTCCAGGATTAGAGACAAAAACAGAGGATAGGGAGGGGAAGAAATACATTGTAGCCTACCACGCAGC  
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ACCACTTCACTGTTGTTCTCAGAAATATAACAGGAACTGATGACCAAGTACAGCAAGCTATGAACTCT  
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GCCCTCAGAAAACCTGTCAAAAGGTGTGTGGAAGGGCAGCTGCTTCGAGGACTTTCAAAATATGG  
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GGGGACCTCGTTCTCAAAGGAGCCACAGCCACCTATATTGAGGAAGATGATGTTAATAATTACTCTAT  
CCATGATGTGGTAATGCCCTTGCTGTTTCGATGTTATCTACCCAAAGCATAAAATTCAGAAGCCT  
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AGTGACTCTCCACCTCAGCCTCCTAAGTAGCTGGGAGTACAGGCGCGCACCACCACGCCTAGCTGAT  
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TGAGCTGTGCTGGCCGGGTTTTTTTTTCTTGATGTAAACGTGTACAGCTGTTTTATTAGTTAAGGTCT  
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ATAATGGTAGAGAAGAAAACCTATAAAAATGGACAAGGCTTTCTTCTATCAGTAGCGTTTACCCTTTGT  
CACCAGTGGCTTTGGTATTTCCATGTCTGGCATTGCATAAACTTCTCTGGTGTGAAAGGATAAATATG  
CCTTTCTAAAGTTGTATATCAAAATTGTATCAATTTTTATTTTCTATGATTTCTAGAAACAAATGTAA  
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## SEQUENCE ID NO 14

ARRCAARVRARPPVSRLEIRIWSSARKALLLPGRPSRWLIQVAFALLRPNQSAGHLAAQLTPRPRSQA  
PGFLKCF LGALKMEMTEMTGVSLKRGALVVEDNDSGVPVEETKKQKLSECSLT KGQDGLQNDFLSISE  
DVPRPPDTVSTGKGGKNSEAQLEDEEEEEEDGLSEECEEEEESESFADMMKHGLTEADVGITK FVSSHQ  
GFSGILKERYSD FVVHEIGKDGRISHLNDLSIPVDEEDPSEDI FTVLTAEKQRLEELQLFKNKETSV  
AIEVIEDTKEKRTIIHQAIKSLFPGLETKTEDREGKKYIVAYHAAGKKALASEVSVSSFLLPGSRERQ  
APLLVQPCPFVFKGYYSAAQRTILIMSL LQ RGGQNCQDPRKHSWP KSRGSYCHFVLYKENKDTMDAIN  
VLSKYLRVKPNIFSYMGTKDKRAITVQEIAVLKITAQRLAHLNKCLMNFKLGNFSYQKNPLKLGELOQ  
NHFTVVLRNITGTDDQVQQAMNSLKEIGFINYYGMQRF GTTAVPTYQVGRAILQNSWTEVMDLILKPR  
SGAEKGYLVKCREEWAKTKDPTAALRKLPVKRCVEGQLLRGLSKYGMKNIVSAFGIIPRNNRLMYIHS  
YQSYVWNNMVSKRIEDYGLKPVP GDLVLKGATATYIEEDDVNNYSIHDVVMPLPGFDVIYPKHKIQEA  
YREMLTADNLDIDNMRHKIRDYSLSGAYRKIIIRPQNVSWEVVAYDDPKIPLFNTDVDNLEGKTPPVF  
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## SEQUENCE ID NO 15

GGGCACCAGTTGTCAGGAGTTGACAGGAGGGCATAGCCAGGAACAGCTGGTGTCTCCTTACTGGGACA  
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GTCCTGTGAACCCCCACAGTCAGATGGGTGAGGGATGGGGAGGGTCACGCAGGGTGTGGGCGGCGTG  
CCTGGCATGGGTCTGCCAAGTTCGTCAGGTAACGTGATACTTCTCCCTTGCTTTTTTGGTAGATGGAC  
AGTGTGTCACCCTCGGGGAGCAGGTGGGCTGGCAGGACAGGCGGCCCCAGGCCGGGAGAAGGAGACAC  
TCCCAGGTCTGGTAGGCTCCACGACAAAAGTCAACCCTTCTGTAAATCACCTGCTGTGGTTATGATGCT  
CTGAGTTCAATACGTCTGAACCTTTGCTGTCTATGGATCTGCTCTAAACCTTATAGCCTGCTTATGGG  
GGAAGGTGACGCCTTCTGGGCCCCATCTGTCCTTCCTCACAGCACCTCAGCACCTTAAGCCACCACC  
CTCAGCCACAATTTGGCAGAAGGATGGAGTCCAAGGTCTCAGAAGGTGGCCTGAATGTGACCCTCACC  
ATCCGCCTGCTGATGCATGGAAAGGAAGTTGGAAGCATCATCGGGAAGAAAGGAGAAACTGTGAAGAA  
GATGCGTGAGGAGAGTGGTGCAAGGATCAACATCTCAGAGGGAAACTGCCCAGAGAGGATTGTGACCA  
TCACAGGCCCCACAGACGCCATCTTCAAGGCCTTTGCCATGATCGCATAACAAGTTTGAGGAGGATATC  
ATCAACTCCATGAGCAACAGCCCTGCCACCAGCAAGCCCCCAGTGACGCTGAGGCTGGTGGTGCCTGC



CAGCCAGTGCGGGTCCCTGATCGGCAAAGGAGGCTCCAAGATCAAGGAGATCAGGGAGTCCACAGGTG  
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ACCGGCATGCAGTGGTAATTATTTTAGAAATATTGTTCCCTTGGTGTCAGCGTAGCTGTCTGTCTTAGG  
AGCTGGGTCCGGCGTTCCGACAGCACTTCCTGTCCGCCCTTCTCCTCTGCCATCCAGAACCGTCCAGAA  
CTGTTGCCTGAGACCCCTCCTCTCTCACACAGCCCTGCCATGCTGACTCGGTTTCCCCTCAGAGCCAT  
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GCGGAGCCTGCTGGAGGCCCTGCCTTCACAGAGATGCCGCGTGCTGGGAAGGCTCTTGGGGTCCCCTG  
AGCGTCTTCCAGGGTGGCTGGAGAGCACAGACGCGCCAGGGAGCCCCCTCTGTGCTCCTCAGAGTTCA  
ATAAATGTCTGGCCCCCTCCTCA

## SEQUENCE ID NO 16

MGEFDAFWAPSVLPHSTLSTLSHHPQPQFGRRMESKVSEGGLNVTLTIRLLMHGKEVGSIIIGKKGETV  
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PASQCGSLIGKGGSKIKEIRESTGAQVQVAGDMLPNSTERAVTISGTPDAIIQCVKQICVVMLESPPK  
GATIPYRPKPASTPVIFAGGQAYTIQGQYAIHPHDQLTKLHQLAMQQTFFPPLGQTNPAFPGEKLPLH  
SSEEAQNLMGQSSGLDASPASTHELTIPNDLIGCIIGRQGTKINEIROMSGAIKIANATEGSSERQ  
ITITGTPANISLAQYLINARLTSEVTGMGTL

## SEQUENCE ID NO 17

GGATCCGGATTTCGGATTAGCAGCCCGGGAAGAGTGCCGTGGCACAGGCGCCGGAGGGAGCGCGACCCT  
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CCGCCTGAGTCCCCCGCGCCTTGGCCCGCCACCCCCCGCCCCGCGCCCCCGGCCCCGCTGCGCCATGG  
AGCCCCGGCCGCGGCGGCACAGAGACCGTGGGCAAGTTCGAGTTCTCCCGCAAGGACCTGATCGGCCAC  
GGCGCCTTCGCGGTGGTCTTCAAGGGCCGCCACCGCGAGAAGCACGATTTGGAGGTCGCCGTCAAGTG  
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TGAAACATGAAAACATCGTGGCCCTGTACGACTTCCAGGAAATGGCTAATTCTGTCTACCTGGTTATG  
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CAGGCTCTTCCTGCAGCAGATCGCGGGCGCCATGCGGCTTCTGCACAGCAAAGGCATCATCCACCGCG  
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GGGACTCTGGTGGCAGCAAGGACTCTTCCTGTGACACAGATGACTTCGTATGGTCCCCGCGCAGTTT  
CCAGGTGACCTGGTGGCTGAGGCGCCAGTGCCAAACCCCGCCAGACAGCCTGATGTGCAGTGGGAG  
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CCAGTCCCCACGCAGGTGCAGAACTACCAGCGCATTGAGCGAAACCTGCAGTCACCCACCCAGTTCCA  
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AAGCTGCCCAAACCCCCACGGACCCCCTGGGAGCTGTGTTGAGCCACACAGGCCAGCCCTCCCCA  
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ACGGAGATCCTGCGTGGCCTGCGCTTCACGCTGCTGTTCTGTCAGCACGTCTTGGAGATCGCAGCCCT  
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CCTGGGCCCCACGGACAGTCAGCCTGCCGGCCTCCCTGCAGCTCACGGGGCAGAACCAGCACATCTGG  
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CTGCCTGGCTCAGCAGGCGTGGGTGCCACCACCCTCTAGCCCCAGGGCAGCCCCGGAGGACAGGCAAG  
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CCCAGGAAGAGCCTGCGGCCTCGGCGTCCCCAGTCTCCAGGAGCCTCTCCCTCCGAGATACCCACCC  
AGCTTTGTCAATCACCCAAGCACTTTATGCATATAGAGACAGAACCTGGACCTCACCAGGGACTGCTG  
GGCAGCGATTCTTGGCAGTGGCCTGGTGTGTTGTACATACACATATGCAGACACATGCCAGGGCCCCC  
AAGCCCGAGCACCGGACCACGTTGCTGCCAGGTCTGGACCTCAGCGGGAGAACTGGCTCCGGGGGGA  
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GCACCGTGTTCTCTCAGCCCTGGATACGTCTTGTAATCTTTCACACTTTATTCCTAAAACGTGTCTTA  
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ACACCTGTGTTGGTGGCTGTCCCCTGCCGCCCCCTCCCTGTGGCAGCAGCAGGACAGGTGTGTGCCAG  
CACCTCCCTACCTGGGCCTGGAAGCAGATGAGGGGAATACTTCATGCAAAGAAAAAAGTAACATGTG  
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CCTTGGTCTGCCAGCCCTCGGTTAGCCCTGCCTGAATCAGTAGATACTTGAACGAGTCCCCAGTCTG  
CGGGAGGCAGTGGTGGGGCCATGGACCCATGCGGGGGGTTCAGGGTCACACGCCACATAACAGACAA  
AAATACACACACGTGTGTTTTTCTTTGCAATACTTGAAATATTGCCACTGTGCTTGGACTTAGAAGAA  
GAAAATCCCCGTGACTTCTTCTCATCACCTTGATGGCTTTATTCTCACCTTGTGGGGCATGTTTGTA

TTTATTGCTTCATGGCCGACTGGAATCCTGAGTCCTGGGAAGCTGGCACTGCGGGGATCTTGCCCGGT  
GTCCTGGTCCTCTTGCTTCCGTCGCGGCCGCATGTGCGTGTGTCCAAGCAGGTCCTGGGCGCCTCAAC  
TGCTGCCCCCTGGTTGAATGTTCTCTTGATAGTGCTGGACCCTTTGTCTATTTTAAAGCGAATTTTGTG  
TGATTTCCTGCCCTTTGCGTTATATTGTATAATAACCAACGTAAGGAAATAAACCTTTGGAATTGTTGG  
GCTGGTGTCACTT

## SEQUENCE ID NO 18

MEPGRGGTETVGFESRKDLIGHGAFVVFGRHREKHDLEVAVKCINKKNLAKSQTLGKEIKILK  
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RDLKPQNILLSNPAGRRANPNSIRVKIADFGFARYLQSNMMAATLCGSPMYMAPEVIMSQHYDGKADL  
WSIGTIVYQCLTGKAPFQASSPQDLRLFYEKNKTLVPTIPRETSAPLRQLLLALLQRNKHDRMDFDEF  
FHHFPLDASPSVRKSPFPVPSPSYSSSGSSSSSSSSSTSHLASPPSLGEMQQLQKTLASPADTAGFLHS  
SRDSGGSKDSSCDTDDFVMVPAQFPGDLVAEAPSAKPPPDLSMCSGSSLVASAGLESHGRTPSPSPPC  
SSSPSPSGRAGPFSSSRCGASVPIPVPTQVQNYQRIERNLQSPTQFQTPRSSAIRRSGSTSPLGFARA  
SPSPPAHAEHGGVLARKMSLGGGRPYTPSPQVGTIPERPGWSGTPSPQGAEMRGGRSPRPGSSAPEHS  
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QRNPLPPILGSPTKAVPSFDFPKTPSSQNLLALLARQGVVMTPPRNRTL PDLSEVGPFGHQPLGPGLR  
PGEDPKGPFGRSFSTSRLLDLLKAAFGTQAPDPGSTESLQEKPMEIAPSAGFGGSLHPGARAGGTSS  
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ANLEGAVTFEAPDLPEETLMEQEHT EILRGLRFTLLFVQHVLEIAALKGSASEAAGGPEYQLQESVVA  
DQISLLSREWGFAEQVLVLYLKVAELLSSGLQSAIDQIRAGKLCLSSTVKQVVRRLNELYKASVVSCQG  
LSLRLQRFFLDKQRLLDRIHSITAERLIFSHAVQMVQSAALDEMFOHREGCVPRYHKALLLLEGLQHM  
LSDQADIENVTKCKLCIERRLSALLTGICA

## SEQUENCE ID NO 19

CACAGCGGCGGCCGGGTGGCGGGGGTGAGTGGGGCCAGCGGGGCTGGACAGCAGCGGGCCCCGGGCGC  
CGCCGCGCGGATCCCTCCCCGCGCCCGCCGAGCACATCGCCGCGCGCGAGATGGGCCCTCCGCGGCAC  
CCCCAGGCCGCGGAGATAGAAGCGGGCGGTGCGGGCGGCGGGCGGCGGCTACAGGTGGAAATGAGTTC  
TCAACAGTTTCCTCGGT TAGGAGCCCCTTCTACCGGGCTGAGCCAGGCCCTTCTCAGATTGCAAACA  
GTGGTTCTGCTGGATTGATAAACCCAGCTGCTACAGTCAATGATGAATCTGGTTCGAGATTCTGAAGTC  
AGTGCCAGGGAGCACATGAGTTCCAGCAGCTCCCTCCAGTCCCGGGAGGAGAAGCAAGAGCCTGTTGT  
GGTAAGGCCCTATCCACAGGTGCAGATGTTGTCGACACACCATGCTGTGCGCATCAGCCACACCTGTTG  
CAGTGACAGCCCCGCCAGCACACCTGACGCCAGCAGTGCCACTTTTCATTTTTCGGAGGGACTTATGAAG  
CCGCCCCCGAAGCCCACCATGCCTAGCCGTCCCATTGCTCCTGCTCCACCTTCTACCCTGTCACTTCC  
CCCCAAGGTTCCAGGGCAGGTTACCGTTACCATGGAGAGTAGCATCCCTCAAGCTTCAGCCATTCTG



TGGCAACAATCAGTGGACAACAGGGCCATCCCAGTAACCTGCATCACATCATGACTACAAATGTGCAA  
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TGCAGCTGCTGCTGCTGTGATGTCCAGTTCTAAAGTAACCACAGTCCTGAGGCCGACCTCACAGCTGC  
CAAATGCTGCTACTGCTCAGCCAGCAGTACAGCACATCATTCACCAACCAATCCAGTCTCGGCCACCT  
GTGACCACCTCCAATGCCATCCCTCCTGCTGTGGTAGCAACTGTCTCAGCCACCAGAGCTCAGTCTCC  
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CTACCATCTCACCTGCATTAGGGACGCCAAAACAGCAGCTTCATACAATGGCTCAGAAAACAATCTT  
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CCCAATCACCAGTTCCGTGTCCACTATCCGACAGTATCCAGTTTCAGCTCAGGCTCCAACTCTGCCA  
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GGCCCCCATTTGGGACCCCAGGGATACAGCCTGCACCACTTGGCACACAGGGAATTCAGTCAAGCAACCC  
CAATCAACACACAAGGGCTTCAGCCTGCACCTATGGGTACTCAGCAGCCTCAGCCTGAAGGAAAGACT  
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CCATGGAGACTGTATCCAATCAAATAATGATCAGCCTACCATTTGCCGTCCCTCCAACCTGCCCAGCAG  
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AAAAAGTGTCCAAATTGAAGCGAAAGGAAAAAGTCTAGACCCAGAACAATCAGGAGATTGGAAGCAAA  
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GAGCTGACTGGACATAGTGAGCTGCCTTCTTGCGTTCGGGTGCACCCCTGTAAACCTGATCTGTGTC  
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AGCTGCCACATCTCACACTCTAAAGGGTTTGAAGTATTAGTTCTTGTCAATTTTTTAAAAAAACCATT  
CCCAAGTGAAATTGTTATATCGTCTGTCTTGCCTGTGTGTCAGAACTGGGTTTTTGTGGAGGTTTCAGAGC  
AGGCAACACCATAAGTTGCTCTCAGATCCTTGTTCTGAAGTACATTCTTGGTTATCTGTACTTCTGTA  
GCTGGTGTGATGCTGTTAATTGTATGTACCACACATCTCCAGACGTTAATAAAGGACTCAAAGAGGTT  
TTTGTA

## SEQUENCE ID NO 20

MGPPRHPQAGEIEAGGAGGGRRLLQVEMSSQQFPRLGAPSTGLSQAPSQIANSGSAGLINPAATVNDES  
GRDSEVSAREHMSSSSSLQSREEKQEPVVVRPYPQVQMLSTHHAVASATPVAVTAPPAHLTPAVPLSF  
SEGLMKPPP KPTMPSRPIAPAPPSTLSLPPKVPQVTVTMESSIPQASAI PVATISGQQGHPSNLHHI  
MTTNVQMSI IRSNAPGPPLHIGASHLPRGAAAAAVMSSSKVTTVLRPTSQLPNAATAQPAVQHI IHQP  
IQSRPPVTTSNAI PPAVVATVSATRAQSPVITTTAAHATDSALS RPTLSIQHPPSAAISIQRPAQSRD  
VTTRITLPSHPALGTPKQQLHTMAQKTI FSTGTPVAAATVAPILATNTIPSATTAGSVSHTQAPTSTI  
VTMTVPSHSSHATAVTTSNIPVAKVVPQQITHTSPRIQPDYPAERSSLIPI SGHRASPNPVAMETRSD  
NRPSVPVQFQYFLPTYPPSAYPLAAHTYTPITSSVSTIRQYPVSAQAPNSAITAQTGVGVASTVHLNP  
MQLMTVDASHARHIQGIQPAPISTQGIQPAPIGTPGIQPAPLGTQGIHSATPINTOGLQPAPMGTQQP  
QPEGKTS AVVLADGATIVANPISNPFSAAPAATTVVQTHS QSASTNAPAQGSSPRPSILRKKPATDGM  
AVRKTLI PPQPPDVASPRVESSMRSTSGSPRPAGAKPKSEIHVSMATPVTVSMETVSNQNNDQPTIAV  
PPTAQQPPPTIPTMIAAASPPSQPAVALSTIPGAVPITPPITTIAAAPPSVTVGGSLSSVLGPPVPE  
IKVKEEVEPMDIMRPVSAVPPLATNTVSPSLALLANNLSMPTSDLPPGASPRKKPRKQQHVISTEEGD  
MMETNSTDDEKSTAKSLLVKA EKRSPPKEYIDEEGVRYVPVRPRPPITLLRHYNPWKAAYHHFQRY  
SDVRVKEEK KAMLQEIANQKGVSCRAQGKVLHCAAQLLQLTNLEHDVYERLTNLQEGII PKKKAATD  
DDLHRINELIQGNMQRCKLVM DQISEARDSMLKVLDHKDRV LKLLNKNGT VKKVSKLKRKEKV

## SEQUENCE ID NO 21

GGAAAGTTGTGANTGTCGANCTTGATCCTGGCGNGCCGCGGAGTTCACCCTGNGGCCCNNGGAGCAAAG  
TACTAGCTCTGTGATTAGATTGAATTCTCCAACAACAACATCTCAGATTATGGCAAGAAAGAAAAGGA  
GAGGGATTATAGAGAAAAGGCGTCGGGATCGGATAAATAACAGTTTATCTGAGTTGAGAAGACTTGTG  
CCAACCTGCTTTTGAAAAACAAGGATCTGCAAAGTTAGAAAAAGCTGAAATATTGCAAATGACAGTGGA  
TCATTTGAAGATGCTTCAGGCAACAGGGGGTAAAGGCTACTTTGACGCACACGCTCTTGCCATGGACT  
TCATGAGCATAGGATTCCGAGAGTGCCTAACAGAAGTTGCGCGGTACCTGAGCTCCGTGGAAGGCCTG  
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AAGAGACACAGCATGTATTATGCACTTCATTTCTCTACTGTGTGGAGAAAGCAATAAACATTATGAGA  
ATGTTAAACGTTATGCAAAATTATACTTTTAAATATTTGTTTTGAAATTACTGTACCTAGTCTTTTTT  
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## SEQUENCE ID NO 22

VVXVXLILAXRGVHPXAXEQSTSSVIRLNSPTTTSQIMARKKRRGIIEKRRRDRINNSLSELRRRLVPT  
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SDPLRVRLVSHLSTCATQREAAAMTSSMAHHHHPLPHPHWAAAFHHLPAALLQPNGLHASESTPCRLS  
TTSEVPPAHGSALLTATFAHADSA LRMPSTGSVAPCVPLSTSLLSLSATVHAAAAAATAAAHSFPLS  
FAGAFPMLPPNAAA AVAAATAISPPLSVSATSSPQQTSSGTNNKPYR PWGTEVGAF

## SEQUENCE ID NO 23

AGCTAATCGTTGCCAGCGGGGTGTGGACTTCGCCGCTGACCCACCTCCGCCGCTTTGGGTAATTTAG  
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GAAAGTGTACGTGGAGAGGATGTCTACATTGTTTCAGAGTGGTTGTGGCGAAATCAATGACAATTTAAT  
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CTTTTTTTGATATCCCAGTAGACAATTTGTATGCAGAGCCGGCTGTCCTAAAGTGGATAAGGGAGAATA  
TCTCTGAGTGGAGGAAGTGC ACTATTGTCTCACCTGATGCTGGTGGAGCTAAGAGAGTGACCTCCATT  
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TCAGACTTTTGAGGATGTTGTGGAAGAGGCCAGAAAATGGAAGAGACGCCCCTGTAACGGGAATGCTA  
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AGACGGACGCGGAAGGAAACGAACGGTGCCCTGGTGACCCACGAAGGCTGGACCGATGGACGATGACG  
GAAGCCTGAGTCTAGCTACCGGGCAAGCCGGCGCCTGCAGAATGATTGAGGCTCACGACGTGCTCCA  
GAAGCTGAGACCGACAGCGCTGCTCACCGCCAACACGGCTCTGTTCTCTTAACAACAAGGCGCGTGAC  
TCATAGCCTCATCCGTCTAGCACTACGGTCCTTGAGTACAGGCCCCGCCACGGACTGCCCCGTAGCGG  
TCTCCACCTCCACCTGCGTGGAACACACCGGGTCACAGCAAACGCGCGCCCTACCGTTTGTCAACG  
AACCGCCCTATTGTACCCACCCCCCCTTTTT

## SEQUENCE ID NO 24

PNIKIFSGSSHQDLSQKIADRLGLELGKVVTKKFSNQETCVEIGESVRGEDVYIVQSGCGEINDNLME  
LLIMINACKIASASRVTAVIPCFPYARQDKDKSRAPISAKLVANMLSVAGADHIITMDLHASQIQGF  
FDIPVDNLYAEPAVLKWIRENISEWRNCTIVSPDAGGAKRVTSIADRLNVDFALIHKERKKANEVDRM  
VLVGDKDRVAILVDDMADTCGTICHAADKLLSAGATRVYAILTHGIFSGPAISRINNACFEAVVVTN  
TIPQEDKMKHCSKIQVIDISMILAEAIRRTHNGESVSYLFSHVPL

## SEQUENCE ID NO 25

ATGCGCCGACCCGGCGCCATTTTGGTGGCCGGGCGCGGAGGTGATTCCACACTGAGGCGAGCGCGGCG  
GCCGGGGTGGTAGTGGCAGTGTTTCGTGTGCTCAGGTCTGAATCGCCGAGGGAGGAGGCGGTGGAGGAA  
GAGGTGGCGGCGGTGGCGGTGGTCGTAGCGGTGGCGGAGGAGGCGGGTACGAATCAGCTGCGGGCGGA  
GACATGGCCAACATCGCGGTGCAGCGAATCAAGCGGGAGTTCAAGGAGGTGCTGAAGAGCGAGGAGAC  
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## SEQUENCE ID NO 26

MANIAVQRIKREFKEVLKSEETSKNQIKVDLVDENFTELARGEIAGPPDTPYEGGRYQLEIKIPETYPF  
NPPKVRFITKIWHPNISSVTGAICLDILKDQWAAAMTLRTVLLSLQALLAAAEPPDDPQDAVVANQYKQ  
NPEMFKQTARLWAHVYAGAPVSSPEYTKKIENLCAMGFDRNAVIVALSSKSWDVETATELLLSN

## SEQUENCE ID NO 27

TGCGCAGGGCCGGCTCGAAGCGCAAGCAGGAAGCGTTTGCGGTGATCCCGGCGACTGCGCTGGCTAAT  
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GCCTGCCGCCTCCGGAGCGCCTGTGTGGGAACTACCAGGTTGTTTTTCAAAGCAGCGGCACCTATTTTG  
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TGACCATTGTAAGAGTTTTTAAAATATATTCTCTAGGCCGGGCGTGTTGGCTCATGCCTGTAATCCCAG  
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GAATCCTAAACACCCCTTCAGTAAATTTGGGACAGGTAACAAATATACTCTGGAGACTAGACCAAACC  
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## SEQUENCE ID NO 28

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## SEQUENCE ID NO 29

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SEQUENCE ID NO 30

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## SEQUENCE ID NO 31

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ACTGCACTCCAGCCTGGGTGACAGAGCAAGACTCCATCTC

SEQUENCE ID NO 32

MGKGDPPKPRGKMSSYAFFVQTCREEHKKKHPDASVNFSEFSKKCSERWKTMSAKEKGKFEDMAKADK  
ARYEREMKTYI PPKGETKKKFKDPNAPKRPPSAFFLFCSEYRPKIKGEHPGLSIGDVAKKLGEMWNNT  
AADDKQPYEKKAACLKEYEKDIAAYRAKGKPDAAKKGVVKA EKSKKKKEEEEDEEDEDEDEDEDEDEDEE  
DEDEEEDDDDE

SEQUENCE ID NO 33

GGGGGGGGCCTGTCCCGGAGGTGGCGGCGGCCCATCTTGGCGAAGGGGGGATCAGGAAGTGC GGACC  
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CGGAGCGGAGGAACGGAAGGATGCAGCAGCCGCAGCCGCAGGGGCAGCAGCAGCCGGGGCCGGGGCAG  
CAGCTGGGGGGCCAGGGGGCGGCGCCGGGGGCCGGGGGCGGCCAGGGGGGGGGCCCGGGGCCGGGGCC  
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## SEQUENCE ID NO 34

GGGLSRRWRRRHLGEGGIRKCGPRRRRRRRRRRTGAQAGGPGPPAPERNGRMQQPQPQGQQQPGPGQ  
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AAPGPHLPPRGSVPGDPVRIHCNITESYPVPPIWSVESDDPNLA AVLRLVDIKKGNTLLLQHLKRI  
ISDLCKLYNLPQHDPVEMLDQPLPAEQCTQEDVSSSEDEDEEMPEDTEDLDHYEMKEEPEAGKKSEDD  
GIGKENLAILEKIKKNQRQDYLN GAVSGSVQATDRLMKELRDIYRSQSFKGGNYAVELVND SLYDWNV  
KLLKVDQDSALHNDLQILKEKEGADFILLNFSFKDNFPFDPPFVRVVS PVLSSGGYVLGGGAICMELLT  
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## SEQUENCE ID NO 35

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## SEQUENCE ID NO 36

MDPSMGVNSVTISVEGMTCNSCVWTIEQQIGKVNGVHHIKVSLEEK NATIIYDPKLQTPKTLQEAI DD  
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RVSLANSNGTVEYDPLL TSPETLRGAIEDMGFDATLSDTNEPLV VIAQPSSEMPLLTSTNEFYTKGMT  
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FIRELGFGATVIENADEGDGVLELVVRGMT CASCVHKIESSLTKHRGILYCSVALATNKAHIKYDPEI  
IGPRDIIHTIESLGFEASLVKKDRSASHLDHKREIRQWRRSFLVSLFFCIPVMGLMTYMMVMDH HFAT  
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LLVWIVIGFLNFEIVETYFPGYNRSISR TETIIRFAFQASITVLCIACPCSLGLATPTAVMVGTGVGA  
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FALIYNLVGIPIAAGVFMPIGLVLPWMGSAAMAASSVSVVLSSLFLKLYRKPTYESYELPARSQIGQ  
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## SEQUENCE ID NO 37

CAGGAGAACTACATAGCCCAGCATGCAACAGTCTCAACTTTTTT CACGGACACTACATTTCC CAGAAGG  
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## SEQUENCE ID NO 38

MEVAANCSLRVKRPLLDPRFEGYKLSLEPLPCYQLELDAAVA EVKLRDDQYTL EHMHA FGMYNYLHCD  
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## SEQUENCE ID NO 39

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## SEQUENCE ID NO 40

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